

– 21. (Currently Amended) An energy storage microscopic rechargeable battery having internal only chemical reactants, the battery having a volumetric size comprising a micrometer footprint adapted for direct and congruent size integration with microelectromechanical systems and/or microcircuitry to reduce power losses, the microscopic rechargeable battery comprising ~~internal only~~ etched spaced electrodes of reactant material comprising microscopically sized footprints as low as 0.001 cm² with an ~~internal only~~ microscopic space containing electrode reaction accommodating electrolyte interposed between the spaced reactant electrodes. --

– 22. (Previously Presented) The microscopic rechargeable battery according to claim 21 wherein a microscopic separator associated with the electrolyte is interposed between the microscopic electrodes. --

– 23. (Currently Amended) The microscopic rechargeable battery according to claim 21 wherein the [thin] electrode layers comprise generally flat conductive film –

– 24. (Previously Presented) The microscopic rechargeable battery according to claim 21 wherein the microscopic battery is sealed. --

– 25. (Previously Presented) The microscopic rechargeable battery according to claim 21 wherein the battery geometry is selected from the group consisting of: (a) flat cell; (b) spirally wound; (c) bipolar; and (d) linear. --

– 26. (Previously Presented) The microscopic rechargeable battery according to claim 21 wherein the battery geometry is selected from the groups consisting of: (a) wire-shaped; (b) odd-shaped; (c) wire in a can; and (d) peg in a block. --

– 27. (Previously Presented) The microscopic rechargeable battery according to claim 21 wherein at least one electrode comprises a reactant material selected from the group consisting essentially of materials comprising: (a) lead; (b) zinc; (c) nickel; and (d) derivatives thereof [of (a), (b) and (c)]. --

– 28. (Previously Presented) The microscopic rechargeable battery according to claim 21 wherein at least one reactant electrode comprises metal selected from the group consisting essentially of materials comprising: (a) a metal hydride; (b) lithium; (c) silver; and (d) copper, and derivatives thereof. --

– 29. (Previously Presented) The microscopic rechargeable battery according to claim 21 wherein at least one reactant electrode comprises a material selected from the group consisting essentially of materials comprising: (a) platinum; (b) carbon; (c) cadmium; and (d) lanthanum, and derivatives thereof. --

– 30. (Previously Presented) The microscopic rechargeable battery according to claim 21 wherein the reaction accommodating electrolyte is selected from the group consisting essentially of: (a) liquid; [and] (b) solid; and (c) a hybrid of liquid and solid. --

–31. (Previously Presented) The microscopic rechargeable battery according to claim 21 wherein the reaction accommodating electrolyte is selected from the group consisting essentially of: (a) an ion-conducting polymer; (b) lithium glass; and (c) a polymer containing an ionically-conductive material. --

– 32. (Previously Presented) The microscopic rechargeable battery according to claim 30 wherein the liquid reaction accommodating electrolyte comprises an aqueous solution also comprised of potassium hydroxide and/or sulfuric acid. --

– 33. (Currently Amended) An internal electrical energy storage microscopicfabricated rechargeable battery comprising a volumetric microscopic size including a micrometric-sized footprint [for] directly size and electronically integrat[ion]ed into a microelectromechanical system or non-microelectromechanical system microcircuit to alleviate power losses, the battery comprising at least one electrical energy storage cell comprised of internal reactants only in the nature of separated internal microscopicfabricated electrodes each having a footprint within a range of less than 1 cm² to 0.0001 cm² ~~substantially less than 20 cm²~~ of reactant material etched and patterned in place to define an internal microscopicfabricated electrolyte storage space between the etched microscopicfabricated electrodes. --

– 34. (Previously Presented) The microscopic rechargeable battery according to claim 33 wherein at least one reactant electrode comprises a thin film of conductive material. --

–35. (Previously Presented) The microscopic rechargeable battery according to claim 33 further comprising a non-conductivity base upon which components of the microscopic battery are carried. --

– 36. (Previously Presented) The microscopic rechargeable battery according to claim 35 wherein the base is selected from the group consisting essentially of: (a) conformal material and (b) rigid material. --

– 37. (Previously Presented) The microscopic rechargeable battery according to claim 33 further comprising a non-reactant electrolyte influent flow path extending through at least one electrode by which liquid electrolyte is introduced into the storage space. --

– 38. (Previously Presented) The microscopic rechargeable battery according to claim 33 wherein the storage space comprises an etched cavity. --

– 39. (Previously Presented) The microscopic rechargeable battery according to claim 33 wherein a separator associated with electrolyte in the storage space prevents contact between the electrodes. --

– 40. (Previously Presented) The microscopic rechargeable battery according to claim 33 wherein the storage space comprises a porous separator carrying reaction accommodating electrolyte. --